



Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors: OTERO et al.

Application Serial No.: 09/845,138

Filing Date: April 30, 2001

For: APPARATUS, METHODS AND  
ARTICLES OF MANUFACTURE  
FOR CONSTRUCTING AND  
EXECUTING COMPUTERIZED  
TRANSACTION PROCESSES AND  
PROGRAMS

) Group Art Unit: 3624

) Examiner: Daniel S. Felten

) **Appeal Brief Transmittal**

) Attorney Docket No.: G08.052

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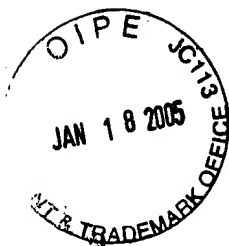
Respectfully submitted,



January 13, 2005  
Date

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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) **APPEAL BRIEF**

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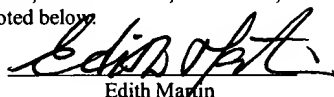
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Alexandria, VA 22313-1450

Sir:

Appellants hereby appeal to the Board of Patent Appeals and Interferences from the decision of the Examiner in the Final Office Action mailed April 8, 2004 (the "Final Office Action"), rejecting claims 6-13 and 18-28<sup>1</sup>.

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<sup>1</sup> The status of claims 33-45 is discussed below, and these claims are argued below on the merits.

## **REAL PARTY IN INTEREST**

The present application is assigned to GOLDMAN, SACHS & COMPANY, 85 Broad Street, New York, New York.

## **RELATED APPEALS AND INTERFERENCES**

No other appeals or interferences are known to Appellants, Appellants' legal representative, or assignee, which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

## **STATUS OF CLAIMS**

Claims 6-13 and 18-28 are pending and stand rejected.

Claims 33-45 are also pending, but the status thereof is not clear in view of the chronology set forth immediately below.

This application was originally filed with claims 1-32.

On October 8, 2003, a first Office Action was issued in this case, rejecting claims 1-32.

On January 5, 2004, applicants filed an Amendment in response to the first Office Action. In this Amendment, claims 1-5, 14-17 and 29-32 were cancelled, other claims were amended, and claims 33-45 were added.

On April 8, 2004, the Examiner issued a Final Office Action, stating a new ground of rejection as to claims 6-13 and 18-28<sup>2</sup>. Although the Final Office Action acknowledged the adding of claims 33-45,<sup>3</sup> it failed to state a disposition of these claims, or to indicate rejection or other consideration of these claims.

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<sup>2</sup> This action also purported to reject claims 29-32, even though these claims had been cancelled.

<sup>3</sup> See page 2, lines 1-2 of the Final Office Action.

On July 1, 2004, applicants filed a paper in response to the Final Office Action. In the Response, applicants pointed out to the Examiner that claims 33-45 had been added in the Amendment of January 2004 and had not been addressed in the Final Office Action.<sup>4</sup>

On October 22, 2004, the Examiner issued an Advisory Action. Unfortunately, the Advisory Action, among other flaws,<sup>5</sup> failed to make note of applicants' comments in the Response which pointed out the Examiner's error of failing to consider claims 33-45.

In trying to make the best of the confusion caused by the Examiner, applicants will argue claims 33-45 below on the merits as if it had been the Examiner's intention to reject these claims along with the other pending claims.

Accordingly, all of the pending claims, which are claims 6-13, 18-28 and 33-45, are being appealed.

## **STATUS OF AMENDMENTS**

No amendments were filed after final rejection.

## **SUMMARY OF CLAIMED SUBJECT MATTER**

### Claim 6

The present invention is concerned with a computer-based securities-trading systems (specification, page 5, lines 13-16). More specifically, the present invention addresses the high cost and labor-intensive nature of conventional programming techniques employed for computerized trading systems (specification, page 2, lines 12-16).

Claim 6 is an independent apparatus claim directed to an "apparatus for computerized trading" (FIG. 10) The claimed apparatus includes "a first algorithm plug-in for implementing a first trading strategy" (FIGS. 1 and 2; specification, page 7, lines 5-10, page 9, lines 4-10, and

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<sup>4</sup> Applicants also presented arguments against the new grounds of rejection set forth in the Final Office Action. No claim amendments were proposed in the Response.

<sup>5</sup> The Advisory Action was presented in a format which purported to deny entry to an amendment after final, even though no such amendment was proposed in the Response of July, 2004. Moreover, the Advisory Action erroneously indicated the pending and rejected claims to be 6-13 and 27-31, which was a further departure from accuracy even as compared to the first page of the Final Office Action.

page 11, lines 3-18). The apparatus recited in claim 6 further includes “a first market plug-in for carrying out trades in a first market” (FIGS. 1 and 2; specification, page 7, lines 12-15 and page 8, line 21 to page 9, line 3). The apparatus recited in claim 6 also includes “an engine for providing services to said first algorithm plug-in and said first market plug-in” (item 10, FIGS. 1 and 2; specification, page 7, line 19), “whereby said first algorithm plug-in and said first market plug-in are implemented in said engine in order to execute a trade” (specification, page 8, lines 7 and 22-24, page 9, lines 4-10 and 16-23).

In addition, the apparatus of claim 6 includes “a second algorithm plug-in for implementing a second trading strategy that is different from said first trading strategy” (specification, page 9, lines 20-23, and page 11, lines 13-18) and “a second market plug-in for carrying out trades in a second market that is different from said first market” (specification, page 8, line 21 to page 9, line 3). Claim 6 further recites “whereby either of said second algorithm plug-in and said second market plug-in may be substituted for either of said first algorithm plug-in or said first market plug-in respectively, in said engine, in order to execute a trade” (specification, page 5, line 22 to page 6, line 1, page 9, lines 6-10), and “wherein each of said plug-ins and said engine are comprised of one or more object classes” (specification, page 6, lines 5-7).

#### Claim 18

Claim 18 is an independent claim directed to a method for computerized trading. Claim 18 recites providing items recited in claim 6 and other steps also recited in claim 6. This honorable Board is respectfully referred to the above discussion of claim 6 in regard to the corresponding description in the disclosure of this application.

#### Claim 33

Claim 33 is directed to a “method for computerized trading” (specification, page 6, lines 19-21). The method recited in claim 33 includes “providing a plurality of algorithm plug-ins,

each of the algorithm plug-ins for implementing a respective trading strategy from a plurality of trading strategies, all of the trading strategies being different from each other” (FIGS. 1 and 2; specification, page 7, lines 5-10 and page 11, lines 3-18) and “providing a plurality of market plug-ins, each of the market plug-ins for implementing rules for a respective market from a plurality of markets, all of the markets being different from each other” (FIGS. 1 and 2; specification, page 7, lines 12-15 and page 8, line 21 to page 9, line 3). The method recited in claim 33 also includes “selecting one of the algorithm plug-ins” (FIGS. 1, 2, 4 and 6-9; specification, page 8, lines 7-8 and page 9, lines 4-12) and “selecting one of the market plug-ins” (FIGS. 1, 2, 7-9; specification, page 8, line 21). The method recited in claim 33 further includes “configuring an engine with the selected one of the algorithm plug-ins and with the selected one of the market plug-ins” (FIGS. 1, 2, 6 and 7; specification, page 5, line 20 to page 6, line 1). Claim 33 also recites that the engine is “for providing to the selected one of the algorithm plug-ins access to market data and for sending orders on behalf of the selected one of the algorithm plug-ins and for receiving notification of executions of orders on behalf of the selected one of the algorithm plug-ins” (specification; page 7, lines 19-23). In addition, the method recited in claim 33 includes “using the configured engine to carry out trades in accordance with the trading strategy implemented by the selected one of the algorithm plug-ins and in accordance with market rules implemented by the selected one of the market plug-ins” (FIGS. 8 and 9; specification, page 21, lines 12-14, page 5, line 22 to page 6, line 3 and page 9, line 10 to page 10, line 2). Finally, claim 33 recites that “each of said plug-ins and said engine comprise one or more object classes” (specification, page 6, lines 5-7 and claims 1 and 6 as originally filed).

Claim 34 (dependent on claim 33; also argued separately)

Claim 34 recites the additional limitations, “a first one of said market plug-ins implements a first limit on trading volume and a second one of said market plug-ins implements a second limit on trading volume, the second limit being different from the first limit” (specification, page 8, line 21 to page 9, line 1).

Claim 35 (dependent on claim 33; also argued separately)

Claim 35 recites the additional limitations that the plurality of trading strategies implemented respectively by the algorithm plug-ins include at least two of the following strategies: (a) a volume-weighted-average-price strategy; (b) a ratio strategy in which a first instrument is bought and a related instrument is sold in response to a certain ratio between respective prices of the first instrument and the related instrument; (c) a hedging strategy; (d) a short selling strategy; (e) a stop loss strategy; (f) an “iceberg” strategy in which a part that is less than all of an order is sent to market at any given time; and (g) an auto trader strategy to determine whether a trade is to be sent to market or filled from an account (specification, page 8, lines 7-20 and page 11, lines 3-18).

Claim 40

Claim 40 is an independent claim directed to an apparatus for computerized trading. Claim 40 recites the same plurality of algorithm plug-ins, plurality of market plug-ins and engine that are recited in claim 33. Claim 40 also, like claim 33, recites that each of the plug-ins and the engine comprise one or more object classes. This honorable Board is respectfully referred to the above discussion of claim 33 in regard to the corresponding description in the disclosure of this application.

Claim 41 (dependent on claim 40; also separately argued)

Claim 41 recites the same limitations set forth in claim 34; this honorable Board is respectfully referred to the above discussion of claim 34 in regard to the corresponding description in the disclosure of this application.

Claim 42 (dependent on claim 40; also separately argued)

Claim 42 recites the same limitations set forth in claim 35. This honorable Board is respectfully referred to the above discussion of claim 35 in regard to the corresponding description in the disclosure of this application.



#### Claim 45

Claim 45 is an independent article of manufacture claim directed to a computer-readable signal bearing medium and means therein for performing the steps recited in claim 33. This honorable Board is respectfully referred to the above discussion of claim 33 in regard to the corresponding description in the disclosure of this application.

#### **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

Claims 6-13 and 18-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Breen et al. (hereinafter "Breen"), U.S. Patent No. 6,615,188, in view of Young, U.S. Patent No. 6,377,939.

Also, as indicated in the above section regarding "Status of Claims", appellants assume that it was also the Examiner's intention to reject claims 33-45 on the same grounds as claims 6-13 and 18-28.

#### **ARGUMENT**

It is appellants' main contention that the Examiner has failed to establish *prima facie* obviousness of the claimed invention, because at least some limitations of the claims are not taught or suggested by the prior art--the Breen and Young references--relied upon by the Examiner. Appellants rely on the authority of *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974), cited in MPEP § 2143.03 (entitled "All Claim Limitations Must Be Taught or Suggested"). Even if the teachings of Breen and Young are combined as proposed by the Examiner, the resulting system would lack some of the limitations recited in the independent claims. As will be seen, the missing limitations include two algorithm plug-ins for implementing mutually different trading strategies, and two market plug-ins for carrying out trades in mutually different markets.

**I. Claims 6-13 and 18-28 are patentable over the combination of the Breen and Young references**

Appellants believe that the basic flaw in the Examiner's rejection of claims 6-13 and 18-28 is that the Examiner has ascribed to the Breen reference teachings that in fact are not present therein.

The invention allows software for securities trading to be customized by importing plug-ins to an engine infrastructure as desired to implement a particular trading strategy in a particular market. (Specification, page 7, lines 5-10, page 8, line 21 to page 9, line 3.) Claim 6 is taken as representative of this group of claims. Claim 6 recites a first algorithm plug-in for implementing a first trading strategy and a second algorithm plug-in for implementing a second trading strategy that is different from the first trading strategy. Claim 6 further recites a first market plug-in for carrying out trades in a first market and a second market plug-in for carrying out trades in a second market that is different from the first market. Either of the second algorithm plug-in and the second market plug-in may be substituted for either of the first algorithm plug-in or the first market plug-in respectively in an engine which provides services to the first algorithm plug-in and the first market plug-in to execute a trade.

Before discussing in detail the Examiner's reliance on the Breen and Young references, appellants will first generally describe the nature of the systems described in those references.

Breen discloses an online trading system in which orders are collected and aggregated into larger orders to be presented to a securities exchange (Abstract; column 5, lines 35-43). Breen's system includes a trading server 14 (FIG. 1; column 8, lines 6-8 and 18-20) and order terminals 12 connected at least temporarily to the trading server (FIG. 1; column 8, lines 6-9; column 7, lines 41-51). The order terminals may be used by investors to place orders with the trading server (column 7, lines 41-45, 63-66, 5-8). The trading server (via its constituent transaction server 50) aggregates orders from investors and places the resulting combined orders with a securities exchange for execution (column 7, line 66 to column 8, line 5; column 12, lines 2-7 and 30-33; column 7, lines 7-8).

Young discloses a system for metering and billing telecommunication services (column 4, lines 28-39). The software for this system is constructed out of processing modules, referred to as "plug-ins", that operate under the control of an execution management framework (column 2, lines 42-58; FIG. 4, item 425). The plug-ins described in Young calculate "property" values

for “sessions” (column 10, lines 42-45). The term “session” refers to the use of a service (column 4, lines 10-12). The term “property” refers to a quantity that may be metered for a particular service, such as duration of the session or quantity of data transmitted (column 4, lines 16-24).

The Examiner’s comparison of features of the Breen and Young references with the language of claim 6 is very terse and does not strictly follow the specific language of claim 6. Nevertheless, as best understood, the Examiner apparently asserts that Breen discloses Java applets that perform the functions of the algorithm and market plug-ins recited in claim 6. The Examiner concedes that Breen does not disclose algorithm plug-ins and market plug-ins per se, but the Examiner goes on to assert that the teachings of the Young reference in regard to plug-ins would have made it obvious to substitute plug-ins for the applets disclosed in Breen.<sup>6</sup> However, appellants note that the applets mentioned in the Breen reference do not provide the functions recited in claim 6 with respect to the first and second algorithm plug-ins and the first and second market plug-ins.

Because of the heavy reliance placed by the Examiner on the “applets” mentioned in the Breen reference, the relevant passage (column 7, lines 56-62) is set forth verbatim below:

The software operating the order terminal function on a general purpose personal computer might be a browser that displays HTML (HyperText Markup Language), JavaScript, JAVA™ Server Pages and/or JAVA™ applets communicates with server software running on the trading server using the well-known HyperText Transport Protocol (HTTP) or a variation thereof.<sup>7</sup>

In appellants’ view, what is crucial about this passage is that it does not specify that one applet is for implementing a first trading strategy and a second applet is for implementing a second trading strategy that is different from the first trading strategy. Neither does this passage specify that the applets include an applet for carrying out trades in a first market and another applet for carrying out trades in a second market that is different from the first market. Thus, substituting plug-ins for the applets referred to in the Breen reference would not result in the claimed apparatus having a first algorithm plug-in for implementing a first trading strategy, a

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<sup>6</sup> See page 3, first full paragraph, of the Final Office Action.

<sup>7</sup> It is noted that this sentence does not scan properly and it is believed that a proper reading of this sentence calls for the word “and” to be inserted just before the word “communicates”.

second algorithm plug-in for implementing a second trading strategy that is different from the first trading strategy, a first market plug-in for carrying out trades in a first market and a second market plug-in for carrying out trades in a second market that is different from the first market.

Thus, the Breen reference fails to disclose limitations recited in claim 6, and the deficiencies of the Breen reference are not compensated for by the teachings of the Young reference. It is therefore respectfully requested that this honorable Board reverse the rejection of claims 6-13 and 18-28.

## **II. Claims 33-45 are patentable over the Breen and Young references**

Claim 33 is taken to be representative of the claims of this group.

Claim 33 is an independent claim directed to a method for computerized trading. The recited method includes providing a plurality of algorithm plug-ins each for implementing a respective trading strategy from a plurality of trading strategies, with all of the trading strategies being different from each other. The recited method further includes providing a plurality of market plug-ins each for implementing rules for a respective market from a plurality of markets, with all of the markets being different from each other. The recited method also includes configuring an engine with a selected one of the algorithm plug-ins and with a selected one of the market plug-ins, where the engine is for providing to the selected algorithm plug-in access to market data. The engine is also for sending orders on behalf of the selected algorithm plug-in and for receiving notification of execution of orders on behalf of the selected algorithm plug-in.

As noted above, the Breen reference fails to disclose a plurality of applets each for implementing a respective trading strategy. Moreover, Breen also fails to disclose a plurality of applets each for implementing rules for a respective market. Thus, even if plug-ins were substituted for the applets mentioned in the Breen reference, the resulting system would not result in the method recited in claim 33.

Moreover, neither Breen nor Young discloses an engine that provides to a selected algorithm plug-in (or applet) access to market data. Still further, neither reference discloses an engine that sends orders on behalf of a selected algorithm plug-in or applet, nor an engine that receives notification of execution of orders on behalf of a selected algorithm plug-in or applet.

To summarize appellants' contentions in regard to claim 33, the Breen and Young references, even taken in combination, fail to teach or suggest several limitations recited in the

claim. It is therefore respectfully requested that this honorable Board find that claims 33-45 are patentable over the prior art relied upon by the Examiner.

**III. Separate Argument in Support of Claims 34 and 41**

Claim 34 adds to the method of claim 33 the additional limitations that one of the market plug-ins implements a first limit on trading volume and another one of the market plug-ins implements a second limit on trading volume, where the second limit is different from the first limit.<sup>8</sup> Appellants point out that neither of the Breen and Young references discloses even one market plug-in or applet that implements a limit on trading volume. Accordingly, claim 34 is believed to be allowable on grounds that are independent of the grounds argued above in regard to claim 33.

**IV. Separate Argument in Support of Claims 35-37 and 42-44**

Claim 35 adds to the method recited in claim 33 the additional limitation that the plurality of trading strategies respectively implemented by the algorithm plug-ins include at least two of the following: (a) a volume-weighted-average-price strategy; (b) a ratio strategy in which a first instrument is bought and a related instrument is sold in response to a certain ratio between respective prices of the first instrument and the related instrument; (c) a hedging strategy; (d) a short selling strategy; (e) a stop loss strategy; (f) an “iceberg” strategy in which a part that is less than all of an order is sent to market at any given time; and (g) an auto trader strategy to determine whether a trade is to be sent to market or filled from an account (specification, page 8, lines 7-20 and page 11, lines 3-18).<sup>9</sup>

Appellants note that the Breen reference fails to disclose a system which implements two or more of these trading strategies. Young, on the other hand, is not concerned at all with trading strategies. It is therefore submitted that the claims in this group would be allowable even if claims 33 and 40 were not.

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<sup>8</sup> Claim 41 adds the same limitations to its parent claim 40.

<sup>9</sup> Claim 42 adds the same limitations to its parent claim 40. Claims 36 and 37 are dependent on claim 35. Claims 43 and 44 are dependent on claim 42.

## CONCLUSION

The rejections appealed from are improper at least because the references relied upon by the Examiner fail to teach or suggest at least some element of every claim. Therefore, Appellants respectfully request that the Examiner's rejections be reversed.

This Brief is filed within two months from the date of mailing of the Decision granting appellants' Petition to Revive (*i.e.*, within two months of December 16, 2004); as such, no extension of time is believed due. However, if any additional fees are due in conjunction with this matter, the Commissioner is hereby authorized to charge them to Deposit Account 50-1852. An Appendix of claims involved in this appeal is attached hereto.

If any issues remain, or if the Examiner or the Board has any further suggestions for expediting allowance of the present application, kindly contact the undersigned using the information provided below.

Respectfully submitted,



January<sup>13</sup>, 2005  
Date

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Attachment: Appendix of claims

## APPENDIX

6. An apparatus for computerized trading comprising:
  - a first algorithm plug-in for implementing a first trading strategy,
  - a first market plug-in for carrying out trades in a first market,
  - an engine for providing services to said first algorithm plug-in and said first market plug-in, whereby said first algorithm plug-in and said first market plug-in are implemented in said engine in order to execute a trade,
  - a second algorithm plug-in for implementing a second trading strategy that is different from said first trading strategy,
  - a second market plug-in for carrying out trades in a second market that is different from said first market,whereby either of said second algorithm plug-in and said second market plug-in may be substituted for either of said first algorithm plug-in or said first market plug-in respectively, in said engine, in order to execute a trade, and wherein each of said plug-ins and said engine are comprised of one or more object classes.
7. An apparatus as in claim 6 wherein said implementation of said plug-ins further comprises implementation of at least one parameterized plug-in.
8. An apparatus as in claim 6 wherein said plug-ins are selected from a predetermined group of plug-ins.
9. An apparatus as in claim 6 wherein said algorithm plug-ins further comprise events and actions.

10. An apparatus as in claim 9 wherein said events and actions are selected from a predetermined group of events and actions.
11. An apparatus as in claim 10 wherein said events and actions comprise Java classes.
12. An apparatus as in claim 6 wherein said second algorithm plug-in is comprised of a modified third algorithm plug-in.
13. An apparatus as in claim 12 wherein said third algorithm plug-in is comprised of said first algorithm plug-in.
18. A method for computerized trading comprising:
  - providing a first algorithm plug-in for implementing a first trading strategy,
  - providing a first market plug-in for carrying out trades in a first market,
  - providing an engine for providing services to either of said first algorithm plug-in or said first market plug-in,
  - implementing said first algorithm plug-in and said first market plug-in in said engine,
  - providing a second algorithm plug-in for implementing a second trading strategy that is different from said first trading strategy,
  - providing a second market plug-in for carrying out trades in a second market that is different from said first market, and
  - substituting either of said second algorithm plug-in or said second market plug-in for either of said first algorithm plug-in or said first market plug-in respectively, in said engine, in order to execute a trade, and wherein each of said plug-ins and said engine are comprised of one or more object classes.



19. A method as in claim 18 wherein the step of implementing said first algorithm plug-in and said first market plug-in in said engine further comprises implementing at least one parameterized plug-in.
20. A method as in claim 18 wherein the step of substituting either of said second algorithm plug-in or said second market plug-in for either of said first algorithm plug-in or said first market plug-in respectively, in said engine, in order to execute a trade, further comprises parameterizing the substituted plug-in.
21. A method as in claim 18 further comprising the step of selecting said plug-ins from a predetermined group of plug-ins.
22. A method as in claim 18 further comprising the step of constructing said algorithm plug-ins from a group of events and actions.
23. A method as in claim 22 further comprising the step of selecting said events and actions from a predetermined group of events and actions.
24. A method as in claim 22 further comprising the step of selecting said plug-ins from a predetermined group of said events and actions comprised of Java classes.
25. A method as in claim 18 further comprising the step of modifying a third algorithm plug-in to construct, at least in part, said second algorithm plug-in.
26. A method as in claim 25 wherein said third algorithm plug-in is comprised of said first algorithm plug-in.

27. The algorithm plug-in produced by the method of claim 22.
28. The plug-in produced by the method of claim 25.
33. A method for computerized trading, comprising:  
providing a plurality of algorithm plug-ins, each of the algorithm plug-ins for implementing a respective trading strategy from a plurality of trading strategies, all of the trading strategies being different from each other;  
providing a plurality of market plug-ins, each of the market plug-ins for implementing rules for a respective market from a plurality of markets, all of the markets being different from each other;  
selecting one of the algorithm plug-ins;  
selecting one of the market plug-ins;  
configuring an engine with the selected one of the algorithm plug-ins and with the selected one of the market plug-ins, the engine being for providing to the selected one of the algorithm plug-ins access to market data and for sending orders on behalf of the selected one of the algorithm plug-ins and for receiving notification of executions of orders on behalf of the selected one of the algorithm plug-ins; and  
using the configured engine to carry out trades in accordance with the trading strategy implemented by the selected one of the algorithm plug-ins and in accordance with market rules implemented by the selected one of the market plug-ins;  
wherein each of said plug-ins and said engine comprise one or more object classes.
34. A method as in claim 33, wherein a first one of said market plug-ins implements a first limit on trading volume and a second one of said market plug-ins implements a second limit on trading volume, the second limit being different from the first limit.

35. A method as in claim 33, wherein the plurality of trading strategies implemented respectively by said algorithm plug-ins comprise at least two of the group of trading strategies consisting of: (a) a volume-weighted-average-price strategy; (b) a ratio strategy in which a first instrument is bought and a related instrument is sold in response to a certain ratio between respective prices of the first instrument and the related instrument; (c) a hedging strategy; (d) a short selling strategy; (e) a stop loss strategy; (f) an “iceberg” strategy in which a part that is less than all of an order is sent to market at any given time; and (g) an auto trader strategy to determine whether a trade is to be sent to market or filled from an account.

36. A method as in claim 35, wherein the plurality of trading strategies implemented respectively by said algorithm plug-ins comprise at least three of the group of trading strategies consisting of: (a) a volume-weighted-average-price strategy; (b) a ratio strategy in which a first instrument is bought and a related instrument is sold in response to a certain ratio between respective prices of the first instrument and the related instrument; (c) a hedging strategy; (d) a short selling strategy; (e) a stop loss strategy; (f) an “iceberg” strategy in which a part that is less than all of an order is sent to market at any given time; and (g) an auto trader strategy to determine whether a trade is to be sent to market or filled from an account.

37. A method as in claim 36, wherein the plurality of trading strategies implemented respectively by said algorithm plug-ins comprise at least four of the group of trading strategies consisting of: (a) a volume-weighted-average-price strategy; (b) a ratio strategy in which a first instrument is bought and a related instrument is sold in response to a certain ratio between respective prices of the first instrument and the related instrument; (c) a hedging strategy; (d) a short selling strategy; (e) a stop loss strategy; (f) an “iceberg” strategy in which a part that is less than all of an order is sent to market at any given time; and (g) an auto trader strategy to determine whether a trade is to be sent to market or filled from an account.

38. A method as in claim 33, further comprising:  
parameterizing the selected one of the algorithm plug-ins to execute at least one trade.
39. A method as in claim 33, wherein the selecting of one of the algorithm plug-ins includes selecting a selection from a pull-down menu.
40. An apparatus for computerized trading comprising:  
a plurality of algorithm plug-ins, each of the algorithm plug-ins for implementing a respective trading strategy from a plurality of trading strategies, all of the trading strategies being different from each other;  
a plurality of market plug-ins, each of the market plug-ins for implementing rules for a respective market from a plurality of markets, all of the markets being different from each other;  
an engine configured with a selected one of the algorithm plug-ins and with a selected one of the market plug-ins, the engine being for:  
providing to the selected one of the algorithm plug-ins access to market data;  
sending orders on behalf of the selected one of the algorithm plug-ins;  
receiving notification of executions of orders on behalf of the selected one of the algorithm plug-ins; and  
carrying out trades in accordance with the trading strategy implemented by the selected one of the algorithm plug-ins and in accordance with market rules implemented by the selected one of the market plug-ins;  
wherein each of said plug-ins and said engine comprise one or more object classes.
41. An apparatus as in claim 40, wherein a first one of said market plug-ins implements a first limit on trading volume and a second one of said market plug-ins implements a second limit on trading volume, the second limit being different from the first limit.

42. An apparatus as in claim 40, wherein the plurality of trading strategies implemented respectively by said algorithm plug-ins comprise at least two of the group of trading strategies consisting of: (a) a volume-weighted-average-price strategy; (b) a ratio strategy in which a first instrument is bought and a related instrument is sold in response to a certain ratio between respective prices of the first instrument and the related instrument; (c) a hedging strategy; (d) a short selling strategy; (e) a stop loss strategy; (f) an “iceberg” strategy in which a part that is less than all of an order is sent to market at any given time; and (g) an auto trader strategy to determine whether a trade is to be sent to market or filled from an account.

43. An apparatus as in claim 42, wherein the plurality of trading strategies implemented respectively by said algorithm plug-ins comprise at least three of the group of trading strategies consisting of: (a) a volume-weighted-average-price strategy; (b) a ratio strategy in which a first instrument is bought and a related instrument is sold in response to a certain ratio between respective prices of the first instrument and the related instrument; (c) a hedging strategy; (d) a short selling strategy; (e) a stop loss strategy; (f) an “iceberg” strategy in which a part that is less than all of an order is sent to market at any given time; and (g) an auto trader strategy to determine whether a trade is to be sent to market or filled from an account.

44. An apparatus as in claim 43, wherein the plurality of trading strategies implemented respectively by said algorithm plug-ins comprise at least four of the group of trading strategies consisting of: (a) a volume-weighted-average-price strategy; (b) a ratio strategy in which a first instrument is bought and a related instrument is sold in response to a certain ratio between respective prices of the first instrument and the related instrument; (c) a hedging strategy; (d) a short selling strategy; (e) a stop loss strategy; (f) an “iceberg” strategy in which a part that is less than all of an order is sent to market at any given time; and (g) an auto trader strategy to determine whether a trade is to be sent to market or filled from an account.

45. An article for executing computerized trading comprising:
- a computer-readable signal bearing medium;
  - means in the medium for providing a plurality of algorithm plug-ins, each of the algorithm plug-ins for implementing a respective trading strategy from a plurality of trading strategies, all of the trading strategies being different from each other;
  - means in the medium for providing a plurality of market plug-ins, each of the market plug-ins for implementing rules for a respective market from a plurality of markets, all of the markets being different from each other;
  - means in the medium for selecting one of the algorithm plug-ins;
  - means in the medium for selecting one of the market plug-ins;
  - means in the medium for configuring an engine with the selected one of the algorithm plug-ins and with the selected one of the market plug-ins, the engine being for providing to the selected one of the algorithm plug-ins access to market data and for sending orders on behalf of the selected one of the algorithm plug-ins and for receiving notification of executions of orders on behalf of the selected one of the algorithm plug-ins; and
  - means in the medium for using the configured engine to carry out trades in accordance with the trading strategy implemented by the selected one of the algorithm plug-ins and in accordance with market rules implemented by the selected one of the market plug-ins;
  - wherein each of said plug-ins and said engine comprise one or more object classes.